of present conditions. The results of this study confirm the validity of some common ecodesign rules:
- using more efficient motors and to develop compressors which have a bigger efficiency,
- minimize the number of materials used,
- minimize the power consumption during the product's use,
- maximize the compressors "life".

Industry could use this case-study to make Polish designers be aware of the importance of environmental impacts of choices made in product design. Even small constructional changes leading to a diminishment of the energy consumption can strongly reduce environmental burdens caused by the use of comparable compressors. The results of the LCAs have been used to identify options to improve the current design of these technical objects.

The **final results** (indicators) obtained by using different LCIA methods are similar. However, when one takes into account results concerning materials and processes, one can notice some differences. For Ecopoints (NL), for example, the most significant environmental burdens are from copper materials, then electricity and process of non-ferro cast work. For Ecoindicator 95 and Ecopoints (CH), the most dominant are steel, cast iron materials and electricity consumption during process production. Results from normalization and valuation are not comparable because they concern different environmental classes.
The results obtained show that the screw compressor has the lowest detrimental influence on the environment. The main reasons are: simpler construction, lower weight and a life time which is three times longer. In this case, the forecasts of an increase in further market shares positively coexist with the better environmental parameters of this appliance. This is the case in spite of the much higher price of screw compressors on the local market.

In conclusion, the summing up of the results and directions for further research in the area of life cycle assessment are pointed out.

[1] Laskowski, G. (1999): Ekobilansowanie maszyn i urzadzen na przykladzie sprezarek powietrza. Ph.D. dissertation. Poznan University of Technology, Faculty of Machines and Vehicles, Poznan, Poland